

United States Patent No. 4,605,459 to Voltmer et al. (the Voltmer '459 patent), in view of the teaching of United States Patent No. 5,102,485 to Keeler (the Keeler patent), as set forth in paragraph 9 of the previous Office Action.

Claim 19 has been amended to include a portion of the limitation of claim 21, such that the affixing means comprises at least one suction nozzle on a carrier. Furthermore, claim 19 has been amended to specify that each object may have a different thickness. These additional features to claim 19 now define a device capable of, for example, affixing small bags of various thicknesses to printed magazines. A typical small bag may be full of seed. Depending upon the distribution of the seed in each bag, different bags may have different thicknesses. The device, as defined in amended claim 19, by utilizing an affixing means comprised of at least one suction nozzle on a carrier, wherein the carrier is movable in a radial direction for removing an object from the holder at standstill, provides a mechanism by which objects of different thicknesses may be removed from the holder. Additionally, during the time of standstill when a suction nozzle contacts an object, the vacuum from the suction nozzle may be increased to provide a better gripping force between the suction nozzle and the object.

The Voltmer '459 patent is directed to a literature applying machine, whereby a head 21, as discussed in column 3, lines 23-33, is comprised of three outwardly spring-biased suction cups 28 and a pair of pressure rolls 29, 29'. In Figure 1, a head 21 is in its relaxed configuration, as illustrated in the two o'clock position. The head 21 may not be radially extended with respect to the axis of rotation to receive objects of varying thickness either while at standstill or while rotating. Furthermore, when the head 21 extends to the six o'clock position, as illustrated in Figure 1, the head 21 operates to secure a label 19 about a container 20. The motion of the head 21 is dictated by the size of the container 20 and not by the thickness of the label 19. Therefore, there is neither a teaching nor suggestion in the

Not
commensurate
thickness
would not
effect
motion

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Voltmer '459 patent for radial movement of the carrier with respect to the axis of rotation to accommodate objects of various thicknesses.

only new to the art

The Keeler patent, on the other hand, is directed to an apparatus for continuous feeding and synchronized application of fitments to carton blanks, whereby a rotating drum 56 has multiple transfer stations 60 and wherein each station 60 has an air pervious lodgment surface 62, which transfers fitments 20 from a die-cut web 22 to carton blanks B on a continuous motion conveyor line 24. The drum 56 disclosed in the Keeler patent has a fixed diameter and, as a result, any fitments 20 attached to the carton blank B must have a thickness suitable to fit between the supply station 28 and the drum 56 and also between the drum 56 and the opposing roller 58. There is no provision in the Keeler patent to accommodate fitments 20 having a range of thicknesses.

For these reasons, the Applicant believes that amended claim 19 is not obvious from the teaching of the Voltmer '459 patent or the Keeler patent, either alone or in combination with one another. Claim 19 is, therefore, believed to be patentably distinct over these references. Furthermore, dependent claims 20, 21, 23, 25-26, 28-29 and 31-33 depend from what is believed to be patentably distinct independent claim 19 and are, therefore, themselves believed to be patentably distinct.

In Section No. 8 of the Office Action, the Examiner rejects claims 24 and 37 under 35 U.S.C. §103(a) as being obvious from the teaching of the Voltmer '459 patent and the Keeler patent and, further, in view of European Patent Application Publication No. EP 035645 to Utsumi (the Utsumi patent application). In Section No. 9 of the Office Action, the Examiner further rejects claim 27 under 35 U.S.C. §103(a) as being obvious from the teaching of the Voltmer '459 patent and the Keeler patent, in view of the teaching of U.K. Patent Application GB 2,188,608 to Voltmer (the Voltmer '608 patent). Claims 24, 27 and 37, by way of their dependence upon what is believed to be patentably distinct independent claim 19, are themselves believed to be patentably distinct.

In Section No. 10 of the Office Action, the Examiner rejects claims 19-21, 23, 25-26 and 28-29 under 35 U.S.C. §103(a) as being obvious from the teaching of United States Patent No. 4,767,487 to Tomsovic, in view of the teaching of the Keeler patent. As previously mentioned, claim 19 has been amended to specify that the affixing means comprises at least one suction nozzle and, furthermore, to indicate that each object may have a different thickness.

The Tomsovic patent is directed to a method for repositioning discrete articles 12 from the first spacer means 20 to a second spacer means 30 and then to a discharge drum 40, as indicated in Figure 1 of the Tomsovic patent. Of particular note, however, is that each transfer means 34 is comprised of rigid rods mounted within slide bearings 47 for sliding movement relative to the drum 24. As a result, the transfer shoes 34 of the first spacer means 20 are closely spaced from the transfer shoes 34' of the second spacer means 30 to move articles between the feed drum 18 and the discharge drum 40. The transfer shoes 34 and 34' disclosed in the Tomsovic patent are carefully synchronized and have no provision to accommodate articles having different thicknesses. Between each opposing transfer shoe 34 is a rigid rod and the distance between the feed drum 20, the first spacer means 30 and the discharge drum 40 is fixed. Therefore, articles having different thicknesses may not be processed by the device disclosed in the Tomsovic patent. Additionally, the device disclosed in the Keeler patent, as previously mentioned, has no provision for accommodating articles of different thicknesses. On the other hand, the device in accordance with the Applicant's invention includes at least one suction nozzle and radial motion to accommodate articles of different thicknesses. For these reasons, the Applicant believes that claim 19, as amended, is patentably distinct over the teaching of both the Tomsovic patent and the Keeler patent, either alone or taken in combination. Furthermore, claims 20, 21, 23, 25-26 and 28-29 are believed to be patentably distinct over the teaching of these two references by way of their dependence upon what is believed to be patentably distinct independent claim 19.

In Section No. 11 of the Office Action, the Examiner rejects claims 31-33 under 35 U.S.C. §103(a) as being obvious from the teaching of the Tomsovic patent and the Keeler patent, in view of the teaching of the Voltmer '459 patent. Claims 31-33 are believed to be patentably distinct based upon their dependence upon what is believed to be patentably distinct independent claim 19.

In Paragraph Nos. 12 and 13 of the Office Action, the Examiner rejects claims 24 and 37 under 35 U.S.C. §103(a) as being obvious from the teaching of the Tomsovic patent and the Keeler patent, in view of the teaching of the Utsumi patent and, furthermore, rejects claim 27 under 35 U.S.C. §103(a) as being obvious from the teaching of the Tomsovic patent and Keeler patent, in view of the teaching of Voltmer '608 patent. For reasons previously discussed, claim 19 is believed to be patentably distinct and, by way of their dependence, claims 24, 27 and 37 are also believed to be patentably distinct.

In Section No. 14, the Examiner rejects claims 19-21, 23, 25-26 and 28-29 under 35 U.S.C. §103(a) as being obvious from the teaching of United States Patent No. 4,238,267 to Konstantin, in view of the teaching of the Keeler patent. The Konstantin patent is directed to an apparatus for producing shrinkable plastic caps, whereby each of a plurality of mandrels 8 is encased by a band 26 and subjected to heat in tunnel 31. The band 26 conforms to the shape of a mandrel to form a plastic cap 33. A core 7 is extended from the rotating mandrel assembly B, thereby transferring the plastic cap 33 to a cup 34, which is then rotated to align with the neck of a bottle 37. The core 7 is extended and the cap 33b is positioned over the top and neck of bottle 37.

Unlike amended claim 19, this arrangement neither teaches nor suggests a device for affixing objects within a holder, wherein each object may have a different thickness and wherein an affixing means has at least one section nozzle which, in a standstill mode, removes an object from the holder. To the contrary, the Konstantin patent utilizes a plurality of identically shaped mandrels to form bands 26 into a plurality of identically

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shaped conical caps 33a for positioning over a plurality of identically shaped bottles 37. For that reason, while the Konstantin patent may disclose a plurality of cores 7 that are movable in radial directions, there is no arrangement whatsoever to accommodate objects having different thicknesses and, furthermore, there is neither a teaching nor a suggestion of an affixing means at a rotational standstill at the time objects are removed from the holder. As previously discussed, the Keeler patent has no such teaching or suggestion. For these reasons, the Applicant believes that amended claim 19 is patentably distinct over the teaching of the Konstantin patent and the Keeler patent, whether taken alone or in combination with each other. Claims 20, 21, 23, 25, 26, 28 and 29, by way of their dependence upon what is believed to be patentably distinct independent claim 19, are themselves believed to be patentably distinct.

Claims 31-33 are rejected under 35 U.S.C. §103(a) as being obvious from the teaching of the Konstantin patent and Keeler patent, in view of the teaching of the Voltmer '459 patent. Furthermore, claims 24 and 37 are rejected under 35 U.S.C. §103(a) as being obvious from the teaching of the Konstantin patent and Keeler patent, in view of the teaching of the Utsumi patent application. Finally, in paragraph 17, claim 27 is rejected under 35 U.S.C. §103(a) as being obvious from the teaching of the Konstantin patent and Keeler patent, in view of the teaching of the Voltmer '608 patent. In each of these rejections, the Examiner cites either the Konstantin patent or the Keeler patent as the main reference combined with a secondary reference and alleges that this combination teaches the representative claims. The Applicant has previously distinguished the teaching of the Konstantin patent and the teaching of the Keeler patent over independent claim 19. By way of their dependence upon independent claim 19, which is believed to be patentably distinct, claims 31-33, 24, 37 and 27 are believed to be patentably distinct.

The Applicant would like to thank the Examiner for the courtesies extended during the telephone interview conducted January 30, 2003. During that conversation,

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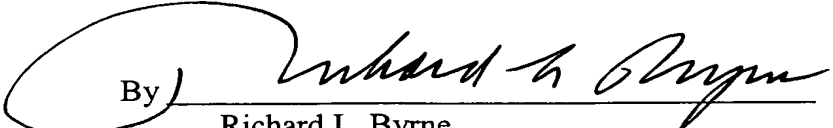
United States Patent No. 3,834,522 to Jackson was discussed as an example of a device which moves carriages radially outwardly during rotation to enable suction cups to grip a container at the unloading station which then retracts inwardly for transporting the container and then moves radially outwardly to feed the container into the stacking device. However, the purpose of this device is to grip containers printed at high speed with a volatile ink and hold each container for a period of time sufficient to allow the ink to dry and then feed the container into a stacking device. As illustrated in Figure 2, a frusto-conical container 109 is fitted on each mandrel indexed at station A and each container is printed with quick drying volatile ink at stations B, C, D and E. Thereafter, the containers are picked off their mandrels at station F by the transfer machine as stated in column 5, lines 14-19, of the Jackson patent. The Jackson patent neither teaches nor suggests an affixing means comprising at least one suction nozzle movable in a radial direction to remove objects of different thicknesses from a holder. For these reasons, claim 19 is believed to be patentably distinct over the teaching of the Jackson patent. Furthermore, each claim depending from claim 19 is believed, by way of this dependence, to be patentably distinct over the teaching of the Jackson patent.

Reconsideration of the rejections and objections and allowance of pending claims 19-21, 23-29, 31-33 and 37 are respectfully requested.

Respectfully submitted,

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MARKED-UP VERSION OF CLAIMS 19 AND 21

19. (Thrice Amended) A device for affixing objects to products moving in a row, the device comprising a holder for a stock of the objects, wherein each object may have a different thickness, and affixing means comprising ~~a~~ at least one suction nozzle on a carrier for removing one of the objects from the holder and moving the object, wherein the affixing means is capable of rotary movement about an axis of rotation and affixing the object to a moving product during the rotary movement of the affixing means, wherein the affixing means is capable of being driven intermittently between rotation and standstill, and wherein during standstill of the affixing means the carrier can remove the object from the holder and wherein the carrier is movable in a radial direction with respect to the axis of rotation for ~~both removing an object from the holder at standstill, and affixing the object to a moving product during rotary motion.~~

21. (Once Amended) The device according to claim 19, ~~wherein the carrier is provided with at least one suction nozzle for engaging one of the objects, and~~ wherein the suction nozzle has a diameter of more than 15 mm.